

IRRIGATION SYSTEM, TAILWATER RECOVERY

PRACTICE INTRODUCTION

USDA, Natural Resources Conservation Service - practice code 447



TAILWATER RECOVERY SYSTEM

A facility to collect, store, and transport irrigation tailwater for reuse in a farm irrigation distribution system.

PRACTICE INFORMATION

The purpose of the practice is to conserve farm irrigation water supplies and water quality by collecting the water that runs off the field surface for reuse in the farm irrigation system.

This practice involves planning and designing a tailwater recovery system, including pickup ditches, sumps, pits, and pipelines. A sump or pit is always needed to store the tailwater until it is redistributed in the farm irrigation system. The pits may be small or large depending on the type of recycling pump and other components of the irrigation delivery system.

All tailwater recovery systems require facilities of some kind to convey the tailwater from the storage pit to the point of reentry into the farm irrigation system. This may involve installing a pump and pipeline to return the water to the upper portion of the farm, or it may only consist of a gravity outlet to a ditch or pipeline to convey the water to a lower section of the farm irrigation system.

The capacity of the return system is determined by an analysis of the entire irrigation system. Irrigation efficiency is used to calculate anticipated runoff rates, the sump or pit storage capacity, and the return pump volume and pressure.

Additional information including specifications and design criteria are filed in the local NRCS Field Office Technical Guide.